

**Ethics in Engineering Practice**  
**Prof. Susmita Mukhopadhyay**  
**Vinod Gupta School of Management**  
**Indian Institute of Technology, Kharagpur**

**Lecture – 02**  
**Introduction to Ethical Reasoning and Engineering Ethics (Contd.)**

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**Ethical theories that are a matter of concern**

There are four ethical theories that will be considered here, each differing according to what is held to be the most important moral concept.

Utilitarianism seeks to produce the most utility, defined as a balance between good and bad consequences of an action, taking into account the consequences for everyone affected.

A different approach is provided by duty ethics. Duty ethics contends that there are duties that should be performed (for example, the duty to treat others fairly or the duty not to injure others) regardless of whether these acts lead to the most good.

Rights ethics emphasizes that we all have moral rights, and any action that violates these rights is ethically unacceptable. Like duty ethics, the ultimate overall good of the actions is not taken into account.

Finally, virtue ethics regards actions as right that manifest good character traits (virtues) and regards actions as bad that display bad character traits (vices); this ethical theory focuses on the type of person we should strive for to be.

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Welcome back to the session. Today we will discuss about the ethical theories that are a matter of concern for ethical decision making. In the last session we discussed about the dilemmas decisional dilemmas that an engineer may phase with respect to the different task at hand furthering engineers starting from the phase of maybe conceptualization of the design. Then the preliminary analysis final analysis, then working on that design, finding out suppliers finding out the ways of doing things again and the final implementation stage and after that going for the maintenance phase.

So, at each and every phase there could be ethical decisional issues dilemmas for the engineer, because at each of the stages there are different stakeholders who are connected and there could be conflict of interest between these track holders. And it may be the case that we cannot satisfy the interest of all the stakeholders at a time and we need to take a decision, which is most ethical in a most ethical way and having a most ethical outcome. Because, we have always to remember that the primary responsibility of the

engineers is to take care of the safety concern, the welfare and the health of the public get large.

So, it is a very huge responsibility and for that each of the task phases of any engineering activities that taken are very important and for solving that we discussed like to arrive at a proper ethical decision. There are certain moral theories which, has help us in taking those decisions act as a support for us in giving us some guiding principles. In today's discussion we will elaborate on those moral ethical pillars which help us to take a proper ethical decision. So, let us see what are those moral pillars which guides us towards proper ethical decision making and help us to solve the dilemmas. Though there are four ethical theories that will be considered over here and each is different according to what is held to be most important moral concept according to these four different pillars.

So, these four different pillars are known as utilitarianism, rights, duties and virtue ethics and we will visit these each of them one by one. First we will go through the definition of it and then we will have a detailed, then we will have a detailed discussion about these theories with examples which will give us a clearer idea of how these theories help us in ethical decision making.

So, what we can see utilitarianism seeks to produce the most utility, which is defined as a balance between the good and the bad consequences of an action, taking into account the consequences for everyone affected. So, what we get to see over here it does a sort of cost benefit analysis in terms of it tries to balances between the good effects and the bad effects consequences of an action and it also takes into account the consequences of everybody affected it.

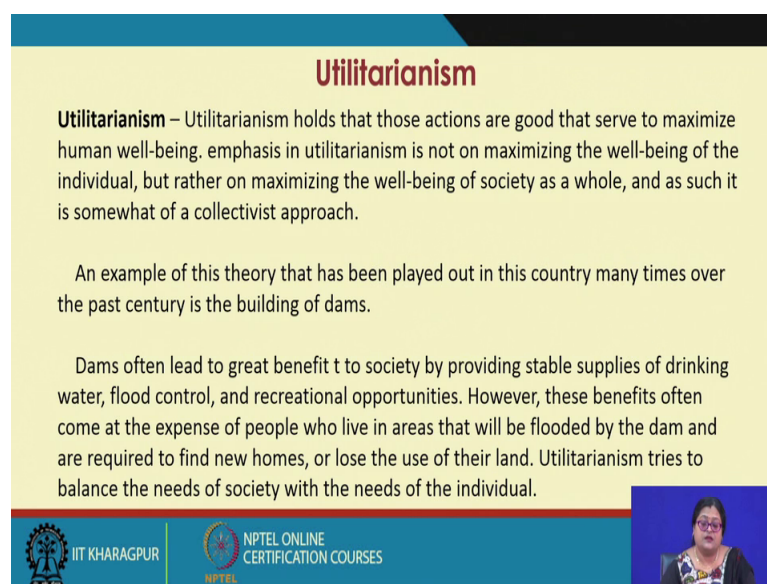
So, it takes care of the majority of the people who gets affected by the decision. A different approach is taken by the duty ethics duty ethics contains that there are duties that should be performed. For example, the duty to treat others fairly or the duty not to injure others, regardless of whether this act leads to the most good or not. So, it what we see in the utilitarianism it speaks of the consequence in duty it talks of the process, like whether it leads to the most good for the most of people or not it is a duty of certain duties that each one of us have towards the other party and or the other stakeholder and we need to perform our duty towards the other stakeholder.

Rights ethics emphasizes that we all have moral rights and any action that violates these rights is ethically unacceptable, like duty ethics the ultimate overall good of the action is not taken into account. So, here also in the rights perspective we see like the process is very important and whether it is a right of every individual to have some moral rights and if any action violates these rights then it is not acceptable and finally when you talk of virtue ethics it regards actions as right, that manifested good character traits virtues and regards actions as bad that display character traits which advises.

This ethical theory focus us on the type of person who is trying to make the decision and who and what type of person we want to become how we want to be known to the outside world. How we want to be known to ourselves whether we want to be known as a virtuous person, how do I see myself this talks of these character traits of people who are which manifests good characteristics are virtuous in nature and those which manifest bad characteristics the character traits are called like their vices.

So, it is a choice of the individual it is a choice of the company, how that organization or how that one individual or how that group wants to visualize it set oneself and how they want others to visualize them also. Now, after this short introduction we are going to discuss each of these theories in details with examples even for each.

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**Utilitarianism**

**Utilitarianism** – Utilitarianism holds that those actions are good that serve to maximize human well-being. emphasis in utilitarianism is not on maximizing the well-being of the individual, but rather on maximizing the well-being of society as a whole, and as such it is somewhat of a collectivist approach.

An example of this theory that has been played out in this country many times over the past century is the building of dams.

Dams often lead to great benefit t to society by providing stable supplies of drinking water, flood control, and recreational opportunities. However, these benefits often come at the expense of people who live in areas that will be flooded by the dam and are required to find new homes, or lose the use of their land. Utilitarianism tries to balance the needs of society with the needs of the individual.

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We will start with utilitarianism, utilitarianism holds that those actions are good that serve to maximize human wellbeing emphasized in utilitarianism is not a maximizing the

wellbeing of the individual, but rather on maximizing the wellbeing of the society as a whole and as such it is somewhat of a collectivist approach. So, what we try to think is what is a good anything that we consider which is a good for the majority we take it to be ethical in this perspective.

So, these type of theories are utilized, when we are going to take a decision about whether to build a dam or not to build a dam because, while building a dam you there are different stakeholders whose conflict who interests will be there. So, there may be people living in that locality, there could be other issues like it could be the environment also is oen of the stakeholders, then there could be other related issues also like displacement of people and all these things.

But again if we need to take a decision which is ethical or not, generally in decisions in these cases are taken where like we try to focus on the purpose of the time for what it is built and the way that it is going to serve the interest of the majority of people, And where, maybe sometimes overlook the individuals benefit and individuals like cost to the individual and the benefits or harm which is caused to the one individual, because what we try to think like the benefits that it is going to bring to the society at large. So, what you can see dams often lead to a great benefit to the society by providing stable supplies of drinking water, flood control and recreational opportunities.

However, these benefits often come at the expense of people who live in areas that will be flooded by the dam and I required to find new homes or lose the use of their land. Utilitarianism tries to balance the need of the society with the needs of the individuals. So, that is what we were discussing there will be conflicts of interest of people staying in that place or whose area is going to get flooded. So, which is more like this is where we do a cost benefit analysis, if you are trying to justify the building of the dam how much benefit it is going to bring to whom at the cost of what and to whom and we need to make a balanced decision about it.

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**Tenets of utilitarianism**

Act utilitarianism focuses on individual actions rather than on rules. The best known proponent of act utilitarianism was John Stuart Mill (1806–1873), who felt that most of the common rules of morality (e.g., don't steal, be honest, don't harm others) are good guidelines derived from centuries of human experience.

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There are two forums of utilitarianism one that we called act utilitarianism and the other is rule utilitarianism act, it utilitarianism focuses on individuals actions rather than rules. The best known proponent of act utilitarianism was John Stuart Mill, who felt that most of the common rules of morality that is do not still be honest do not do harm to others etcetera; are good guidelines derived from centuries of human experience of how doing this act has tried to protect the main interest of the society at large and from that this term has derived as act utilitarianism.

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**Tenets of utilitarianism**

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Rule utilitarianism differs from act utilitarianism in holding that moral rules are most important. As mentioned previously, these rules include “do not harm others” and “do not steal.” Rule utilitarians hold that although adhering to these rules might not always maximize good in a particular situation, overall, adhering to moral rules will ultimately lead to the most good.

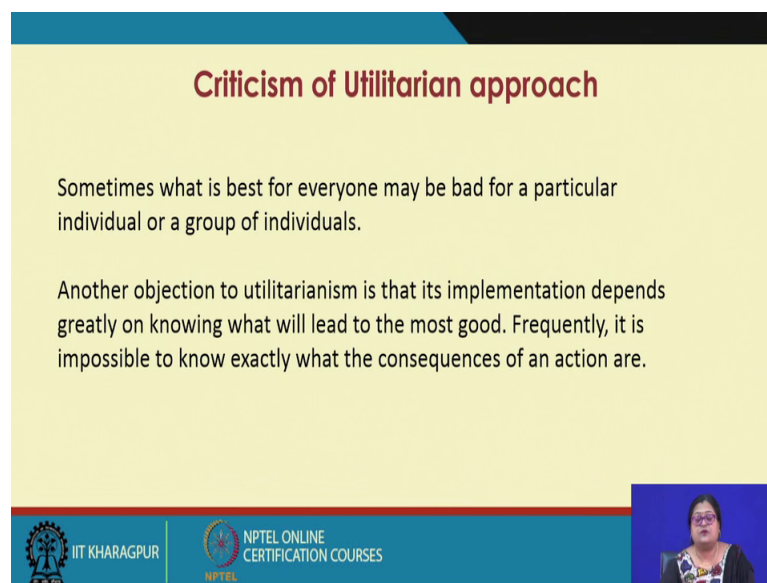
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Rule utilitarianism differs from act utilitarianism in holding that moral rules are most important, as mentioned previously these rules include do not harm others do not steal and these type of things where we talk of we talk of guidelines that people need to follow. Rule utilitarianism hold that although adhering to these rules might not always maximize good in a particular situation, overall adhering to moral rules will ultimately lead to most good.

So, if you see from the maybe short term perspective like if you are talking of do not harm others do not steal etc, in terms of short term gain maybe sometimes what happens we are always not able to see the benefit coming out of these following these rules. But the long term perspective like when it has started yielding it is result, then of course we can get to understand the use the benefit of following these stated principles of rules.

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**Criticism of Utilitarian approach**

- Sometimes what is best for everyone may be bad for a particular individual or a group of individuals.
- Another objection to utilitarianism is that its implementation depends greatly on knowing what will lead to the most good. Frequently, it is impossible to know exactly what the consequences of an action are.

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However there are certain criticisms also of utilitarianism approach and let us see what these criticisms are. So, there is always as I was telling a conflict of interest, so it may so happen sometimes what is in the best interest for everyone may be bad for a particular individual or for a group of individuals, like if we take the case for the dam the people who have to shift from their original place of residence to find out a new place of residence because of this dam coming up.

Then there is an emotional attachment to the place maybe somebody's born and brought up in that place and it is its not only the cost for shifting, but it has an emotional cost also

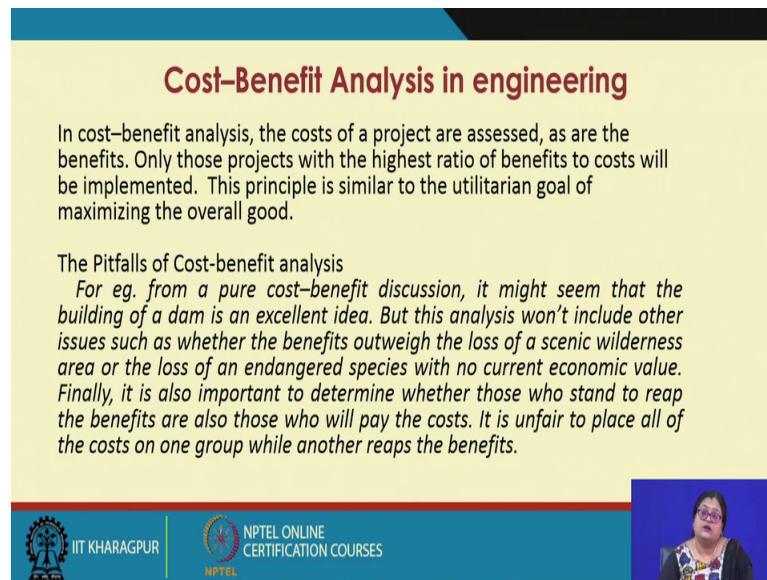
based on the attachment that you have to that particular land and maybe it is from where you get your livelihood and other factors and then there may be a sense of like a loss of for the person. If you are like us to shift from there and there comes again when you talk of compensating for that laws which dragged me of equivalence, but we can never claim like we have exactly compensated for the harm provided on the laws provided to someone because, from the utilitarian perspective we are thinking of the benefit of the larger society.

Because, sometimes it is very vague to define to map out who are this majority that we are talking of, who decides who are this majority of people, how do we try to find out exactly who are using this getting the benefits of the actions and is it as much big as maybe compared to the cost which is involved, what is the pain which is involved when the interest of other stakeholders are considered. So, what may be good for everyone may be bad for a particular individual or a group of individual and but utilitarianism does not like gave much focus on it.

Another object to utilitarianism is that implementation depends greatly on knowing what will lead to the most good. Now here is again a gray area like who defines what is good and who defines what is most good, how do we know how much of doing something will lead to good and most good. So, these are again very abstract definitions and hard to quantify and who we have to depend on the expertise of the people maybe two in a experts to define this.

But what you think the quantity that you think which is that is good the consequence that you think is good for someone, according to that for groups when you go and talk to that group like you may be thinking like something is beneficial for me. But I knew or may not think in the same way, so it is very difficult sometimes to understand like what exactly are the consequences of a particular action.

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**Cost-Benefit Analysis in engineering**

In cost-benefit analysis, the costs of a project are assessed, as are the benefits. Only those projects with the highest ratio of benefits to costs will be implemented. This principle is similar to the utilitarian goal of maximizing the overall good.

**The Pitfalls of Cost-benefit analysis**  
*For eg. from a pure cost-benefit discussion, it might seem that the building of a dam is an excellent idea. But this analysis won't include other issues such as whether the benefits outweigh the loss of a scenic wilderness area or the loss of an endangered species with no current economic value. Finally, it is also important to determine whether those who stand to reap the benefits are also those who will pay the costs. It is unfair to place all of the costs on one group while another reaps the benefits.*

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So, next we move on to the cost benefit analysis in engineering. So, what we can understand from the utilitarianism perspective there is a cost benefit component involved in it, like the net benefit will come when we think of the cost involved and we like take care of the cost and see like how we get answered to this issues where what are the cost factors and how we can answer to those issues. So, in cost benefit analysis, the cost of a projector assessed as are the benefits only those projects with highest ratio of benefits to cost will be implemented, this principle is similar to utilitarianism in goal of maximizing the overall good.

The pitfalls of cost benefit analysis are like something which there are sometimes what happens we cannot measure something based on pure cost benefit discussion. So, it may so happen like the building of a tab may appear to be very excellent idea. So, but this analysis would not include other issues such as whether the benefits outweigh the loss of the cynic wideness of the area or the loss of an endangered species with no current economic value.

Because these are very you know like abstract measures and it is very difficult to convert it in terms of monetary values. But if we see otherwise this has a great these have great aesthetic value maybe great value from terms of in terms of ecological value, but it may not always be possible to quantify it in terms of monetary value, but that does not mean it does not have any worth.





So, from there we move on to the next concept which is called the duty ethics. So, there are these two theories which go hand in hand what we call duty ethics and rights ethics. So, duty ethics and rights ethics are similar to each other and will be considered together, these theories hold that those actions are good they respect the rights of the individuals, here good consequences for society as a whole are not the only moral consideration.

So, here from like whenever we talking of utilitarianism maybe we are taking to concern the interest of a very large group majority, but here in duty ethics we are also taking care of the rights of the individuals and it is like no those actions are taken to be ethical or good, which respects the rights of the individuals are taken as a part of the duty ethics.

So, Immanuel Kant the major proponent of the duty ethics set like the moral values are very fundamental to the nature of the individual. Ethical actions are those actions that could be written down on a list of duties be honest do not cause suffering to other people be fair to others etc. These actions are our duties because they express respectful persons express and unqualified regard for autonomous moral agents and their universal principles.

So, why these are considered to be our duties because, they respect x express respect for persons expression one qualified regard for autonomous moral agents, so we have a high regard for them and a universal principles. So, whichever be the culture and how whichever be the time and all people generally like follow this and that is how it is a become universal principles.

Once ones duties are recognized the ethically correct moral actions are obvious, in this formulation ethical acts as a result of proper performance of ones own duties. So, if we understand like what are our duties responsibilities to the other person to the other stakeholders and we try our best with all proper intentions.

If we try our best with all proper intentions to do our part of duty to the stakeholders, concerned stakeholders then the, it will obviously become ethically correct because, there is a good intention to perform our duty and we understand we owe something to the other person and we need to take up that responsibility and give it back.


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**Rights ethics**

Rights ethics was largely formulated by John Locke (1632–1704), whose statement that humans have the right to life, liberty, and property was paraphrased in the Declaration of Independence of the soon-to-be United States of America in 1776. Rights ethics holds that people have fundamental rights that other people have a duty to respect.

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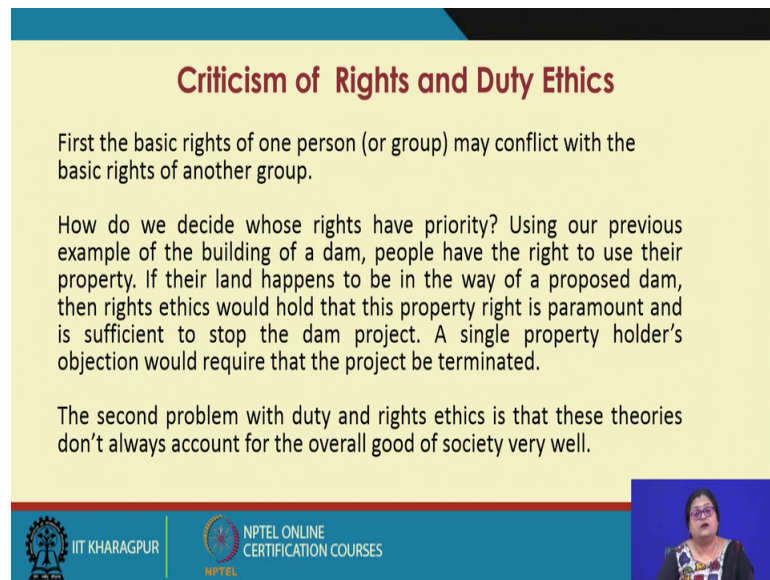
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When you talking of rights ethics rights ethics was formulated by John Locke, whose statement was that humans have a right to life, liberty and property was paraphrased if the Declaration of Independence of the soon to be United States of America in 1776. Rights ethics holds that people have fundamental rights that other people have a duty to respect, so please follow these lines we cannot enjoy certain rights it is not possible for us to enjoy certain rights.

If not the other corresponding stakeholders realizes the duty corresponding to that right and respect that right. So, rights and duties actually goes hand in hand, if we in do our duties and reciprocate then only there other stakeholder can enjoy his or her or their part of right. If I do not realize like they have a right and I do have a corresponding duty to respect that right, then maybe the stakeholder will not be able to enjoy the fruits of that right.

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**Criticism of Rights and Duty Ethics**

First the basic rights of one person (or group) may conflict with the basic rights of another group.

How do we decide whose rights have priority? Using our previous example of the building of a dam, people have the right to use their property. If their land happens to be in the way of a proposed dam, then rights ethics would hold that this property right is paramount and is sufficient to stop the dam project. A single property holder's objection would require that the project be terminated.

The second problem with duty and rights ethics is that these theories don't always account for the overall good of society very well.

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So, again so again there are certain criticisms of the rights and duties theories and let us check what they are. So, what may so happen the basic rights of 1 person may have a conflict of interest with the basic rights of the other group, so how do we decide whom to prioritize because there is a conflict of basic right.

So, it is very difficult to understand like whose rights will have a priority or whose rights are we going to privatize. Using our previous example of the building a dam like people like have they use right to use their property. So, if their land happens to be in the way of the proposed dam, then the right ethics will hold that this property right is paramount and is sufficient to stop the dam project to happen.

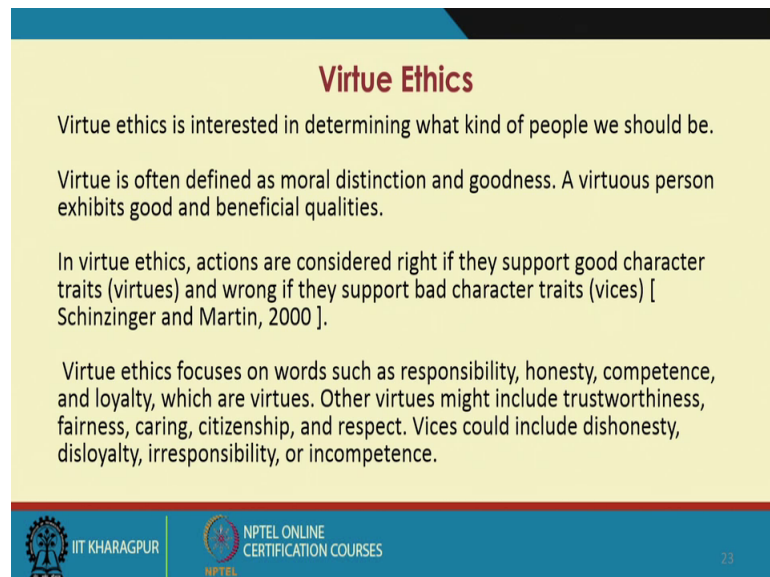
A single property holders objection would require that the project be terminated why because you have a very fundamental right to property and this project the way that it is designed the way that it is passing through is violating that right. So, again if you see the people do have the right to drinking water and if maybe, so that if the dam is not there then they are not going to get those services. So, those two rights are coming into conflict with each other and then how do we understand which one to prioritize is an ethical dilemma.

The second problem with duty and right ethics is that these theories do not always account for the overall good of society very well. So, as it is talking of the individuals rights and individuals duties and vice versa. And maybe it has shifted it is focus from the

society at large the wellbeing of the society at large to small it like to some extent, then they may or may not take into account the overall societies this good when we are focusing on the rights and duties.

If not we are thinking of like we have duty to the society at large and we have the duty to respect the rights of each of the stakeholders and we have to do a cost benefit analysis of if each of the stakeholders are trying to enjoy their rights. Then what are the cost component coming on the other related stakeholders and whether to like how to take care of these costs and after taking care of the cost how then we go for the benefit part of it.

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**Virtue Ethics**

Virtue ethics is interested in determining what kind of people we should be.

Virtue is often defined as moral distinction and goodness. A virtuous person exhibits good and beneficial qualities.

In virtue ethics, actions are considered right if they support good character traits (virtues) and wrong if they support bad character traits (vices) [ Schinzinger and Martin, 2000 ].

Virtue ethics focuses on words such as responsibility, honesty, competence, and loyalty, which are virtues. Other virtues might include trustworthiness, fairness, caring, citizenship, and respect. Vices could include dishonesty, disloyalty, irresponsibility, or incompetence.

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Next we will discuss virtue ethics, virtue ethics decides what kind of person we are; it is often defined as a moral distinction and goodness a virtuous person exhibits good and beneficent qualities. In virtue ethics actions are considered right, if the support a good character traits virtues and wrong if they support to bad character traits or vices.

Virtue ethics focuses onwards such as responsibility honesty competence and loyalty which are the virtues, other virtues might also include trustworthiness fairness caring citizenship and respect these you see are defining qualities of the characteristics of a particular person or an organization that defines the nature of that organization or person.

Vices could include dishonesty disloyalty irresponsibility or incompetence and these needs to be avoided, so we need to promote the virtues and we need to like not to

encourage the vices and if that is done. Then what you can see it helps in developing a virtuous person who because, that person not all that organization nurtures these qualities these gets reflected in their actions and then the decision taken by these organizations or individuals are generally ethical in nature.

Because, while you develop virtuous characters for yourself it gives you a holistic understanding of life, it gives you a holistic perspective of looking at the cost benefits rights and duties of the different interrelated stakeholders from a different perspective in a holistic synergic way and it gives a different meaning. So, and that is why because our thought process starts with virtuous in a virtuous defined ways of high quality virtues and the interactions are guided by them, then it is at evident like the decision taken will be ethical in nature only.

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**Continued**

We can use virtue ethics in our engineering career by answering questions such as:

Is this action honest? Will this action demonstrate loyalty to my community and/or my employer? Have I acted in a responsible fashion? Often, the answer to these questions makes the proper course of action obvious. To use virtue ethics in an analysis of an ethical problem, you should first identify the virtues or vices that are applicable to the situation. Then, determine what course of action each of these suggests.

In using virtue ethics, it is important to ensure that the traits you identify as virtues are indeed virtuous and will not lead to negative consequences

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So, like some examples like how we can use virtue ethics in our engineering carrier, like we can answer these questions is this action honest will this action demonstrate loyalty to my community and or my employer have I acted in a responsible way often the answer to these questions. Makes the proper course of action obvious to use virtue ethics in an analysis of an ethical problem, we should first identify which of the virtues or vices that particularly applicable to that particular situation.



So, after that then we should determine what course of action each of these 2 suggests. So, in fortune ethics it is important very important to ensure that the traits that are

identified are virtuous are indeed virtuous and will not lead to any negative consequences. So, the you have to map the traits with that that gives rise to the nature of the person and the outcome that it is leading to and you have to ensure like these are the virtues which end product, will be virtuous in nature and will not lead any only to any negative consequences.

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<b>McCuen's Ethical Dimensions</b>		
LEVEL 1 Pre-professional	LEVEL 2 Professional	LEVEL 3 Principled Professional
<p><b>Stage 1:</b> Concern is for the gain of the individual (not the company, client, or profession)</p>	<p><b>Stage 3:</b> Loyalty to company is primary focus. Team-player behavior precludes concern for society and environment.</p>	<p><b>Stage 5:</b> Service to human welfare is paramount. Societal rules, morals and values may trump professional standards and corporate loyalty.</p>
<p><b>Stage 2:</b> Corporate loyalty, client confidence, proper conduct are pursued but again only for personal gain and advancement.</p>	<p><b>Stage 4:</b> Loyalty to company is connected to loyalty to the profession. Good engineering is good for the profession, but the societal concerns are not emphasized.</p>	<p><b>Stage 6:</b> Professional conduct is guided solely by a sense of fairness and genuine concern for society, individuals, and the environment. Decisions are based only on well-established personal principles and may contradict professional codes and even social rules.</p>

McCuen's Six Categories of Professional Engineering Morality (McCuen, R. H. (1979). "The Ethical Dimensions of Professionalism." *Issues in Engineering* 105(E12): 89-105.)

Based on this what we can do is we can take up a discussion of the different ethical dimensions and this is called McCuen's ethical dimension. So, just like Kohlberg stages of moral development we can tell like these are 3 stages of development of ethical dimension and it can be it leads to 6 categories of professional engineering morality. So, stage 1 is like pre professional, it is the concern is for the grain we concern is for the concern is for the gain of the individual not to the company client or professional.

So, this is if you see like there is a progression of people, there is a progression of people moving from the pre professional stage to the professional stage to moving to the stage of principal the professional. So, if you see when you start with stage 1 the concern is for the gain of the individual, it is primarily for the individual not to the company client or profession.

So, if you are taking up any project we find that this has my personal gain and maybe it is costly for the organization also we try to recommend. Stage 2 corporate loyalty client confidence proper conductor pursuit, but again only for the personal gain and

advancement, so you exhibit corporate loyalty and you try to gain on client confidence and proper conduct all these you do, but again the it is only interest for personal gain and advancement.

Tomorrow if this you are not able to visualize the personal gain and an advancement, which are involved in these activities it may so happen that you may lose your interest in them, level 2 is called professional. Stage 3 is loyalty to company is a primary focus which you see like which is a progression from stage to team player behavior reclus concern for society and environment.

So, here you are generally from individually and moving to a collective concept of team where we are thinking not for only the welfare of yourself, but you talking of the like other people involved also. Staged 4 loyalty to company is connected to loyalty to the profession. So, there is a certain professional rules regulations ethics stated which are guiding principles of to those who are professionals, how they should behave with respect to certain conditions and envoy. So, here in stage 4 and 5 loyalty to company is connected to the loyalty to the profession, good engineering is good for the profession but the societal concerns are not emphasized over here.

When we move on to the stage 5 in terms of principle professional what do you find like though in stage 4 societal roles my concerns are not very emphasized in stage 5, what we find in principle professionalism professional like the service to human welfare is paramount societal rules morals and values which I am professional standards and corporate loyalty.

Stage 6 is professional conduct is guided solely by a sense of fairness and genuine concern for the society. So, we are going for like soul what is fair to the company at large what is fair for the society at large and how they are going to treat and individuals what is the effect on the environment these are important questions. Decisions are based only on well established personal principles and may contradict professional course and even society loads.

So, decisions are based only on well established personal principles and we contradict with professional codes and even social notes. So, here also what are your personal principles and how they may contradict with a professional codes and rules, these also needs to be checked because what you are developing in yourself is a competency for

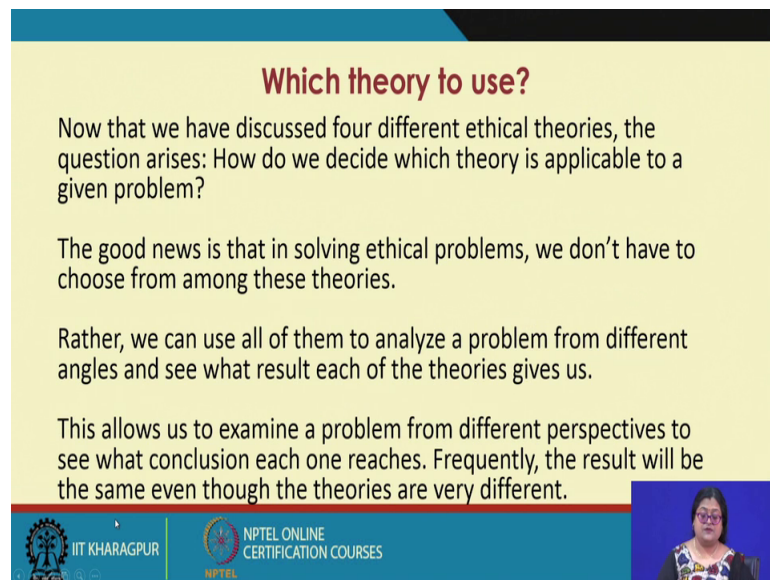


decision making as a like true professional. So, professional conduct is guided solely by a sense of fairness and genuine concern for society.

So, here again your focus is on the society individuals and the environment, so you have focus of like broadens towards the general concern for the society individuals and the environment. Decisions are based only on well established personal principles and may contradict professional course and even societal the social rules.

So, decision at this stage when you are talking of principle professional stage and based on your well established personal principles that the virtues that have got ingrained within oneself and may contradict professional codes and social rules also. So, here because you listen to your inner conscience you listen to the voice within and try to find out what it is telling you trying to tell you because there lies your holistic power of judgment and even though it sometimes may show contradiction with the professional codes and even societal rules. And then you have to take our balance and take a call like whom to listen to if you talk of listening to your like inner voice and be virtuous in nature then you have moved to stage 6 of principled professionalism.

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**Which theory to use?**

Now that we have discussed four different ethical theories, the question arises: How do we decide which theory is applicable to a given problem?

The good news is that in solving ethical problems, we don't have to choose from among these theories.

Rather, we can use all of them to analyze a problem from different angles and see what result each of the theories gives us.

This allows us to examine a problem from different perspectives to see what conclusion each one reaches. Frequently, the result will be the same even though the theories are very different.

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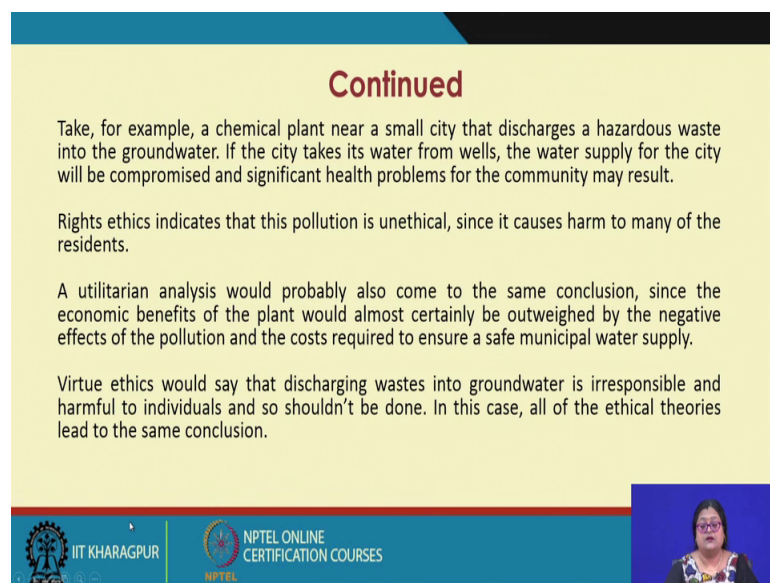
So, now question comes when we know of all these different ethical theories can it be used together, does not need to be used separately which will be used when and how. So, we are going to discuss those now in details, so what we having to understand that in solving ethical problems we do not have to choose from among those the theories. Then

what can we do we can use all of them to analyze a problem from different perspectives and see what is the result that the each of these theory is giving to us.

So, these allows us to examine a proper examine a problem from different perspectives to see what conclusion each one to see what conclusion each 1 reaches. Frequently the result will be the same even though the theories are different so if we see we have taken different paths and if we see like moving through these different paths we are coming to a conclusion.

Then it is fine but it may so happen the results may not be same also and but taking these different perspectives we are able to see the different angles of the problem and then may we do again a analysis we may take a decision on like the which is the which is that path, which takes care of the cost or harp and gives us the maximum benefit to the society at large and we need to traverse travel through that path.

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**Continued**


Take, for example, a chemical plant near a small city that discharges a hazardous waste into the groundwater. If the city takes its water from wells, the water supply for the city will be compromised and significant health problems for the community may result.

Rights ethics indicates that this pollution is unethical, since it causes harm to many of the residents.

A utilitarian analysis would probably also come to the same conclusion, since the economic benefits of the plant would almost certainly be outweighed by the negative effects of the pollution and the costs required to ensure a safe municipal water supply.

Virtue ethics would say that discharging wastes into groundwater is irresponsible and harmful to individuals and so shouldn't be done. In this case, all of the ethical theories lead to the same conclusion.

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So, what we can do like we can take a small example over here, which talks of like when you have discussed these theories. We can take a particular example to find out like you as an illustration what is happening and which are the theories that we need to use; so that we can a see like how do we reach a conclusion.

So, here what you have seen like we have different theories of decision making, we have gone through the 4 theories we have understood like what are the pros and cons of the

each of the theories. But again a question may arise like given a situation given a problem at hand what are through which of these theories we will be applying. This we will take up in next in the next session with a case and we will try to see how to use each of these theories over there.

Thank you.